

ABSTRACT OF THE DISCLOSURE

A method is disclosed for forming LDDs (Lightly Doped Drains) in high voltage devices employed in non-volatile memories and DDDs (Doubly Doped Drains) in flash memory applications. The high voltage device is formed by using two successive ion implantations at a tilted angle which provides an improved gradation of doped profile near the junction and the attendant improvement in junction breakdown at higher voltages. The doubly doped drain in a stacked flash memory cell is also formed by two implantations, but at an optimum tilt-angle, where the first implantation is lightly doped, and the second, heavily doped. The resulting DDD provides faster program speed, reduced program current, increase read current and reduced drain disturb in the flash memory cell.